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ABSTRACT

This study analyzed differences between the study skills of 146 college seniors majoring in elementary education and 115 college seniors majoring in secondary education at a university in mid-South United States. Both samples of students appropriately engaged in less than 60 percent of the study skills measured. Though the overall level of study skills did not differ between the two populations, a discriminant analysis revealed a different approach to studying that differentiated elementary from secondary education majors. Elementary education majors reported general lifestyles that were more conducive to academic achievement (e.g., obtained more adequate sleep) than were the lifestyles of secondary education majors. Secondary education majors, however, were less likely to waste actual study time by doodling or daydreaming and had better note-taking skills than did elementary education majors. Elementary education majors could ascertain important facts easier than secondary education majors, but secondary education majors were better able to apply facts from school to understand events outside of school. (Author/JDD)

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A Comparison of the Academic Behaviors of Elementary and Secondary Education Students

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Abstract

Analyzed differences between the study skills of 146 college seniors majoring in elementary education and 115 college seniors majoring in secondary education at a university in the Mid-South. Both samples of students appropriately engaged in less than 60% of study skills measured. Though the overall level of study skills did not differ between these populations, a discriminant analysis revealed a different approach to studying that differentiated elementary from secondary education majors. Elementary education majors reported general lifestyles that were more conducive to academic achievement (e.g., obtained more adequate sleep) than were the lifestyles of secondary education majors. Secondary education majors, however, were less likely to waste actual study and had better note-taking skills than did elementary education majors. Elementary education majors could ascertain important facts easier than secondary education majors, but secondary education majors were better able to apply facts from school to understand events outside of school. Implications are discussed.

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A Comparison of the Academic Behaviors of Elementary and Secondary Education Students

Because teacher education is constantly evolving and accreditation agencies persistently examine efforts for improving programs, accreditation standards have been altered to address changes in society, diversity of students' needs, and reported weaknesses of inservice teachers. Thus, teacher education programs are currently completing or engaging in accreditation processes which are relatively "new." Through this process, teacher educators are being asked to examine and evaluate their strategies for educating future teachers carefully.

Researchers have been engaged in a search for methods to improve the quality of instruction for decades (Evertson & Smylie, 1986). Although the role of the teacher has been the focus of the majority of teacher education research, the students' role in learning has received little attention (Jones, Slate, Bell, & Saddler, 1991; Lawler-Prince, Slate, & Jones, 1993). Recent research, however, has shown that secondary students typically lack essential study skills (Jones, et al., 1991; Jones, Slate, Blake, & Holifield, 1992). If educational reform is to succeed, students must develop effective learning skills.

Research has shown that study skills are best learned when domain-specific skills are taught in conjunction with the courses that students are currently taking (Langer, & Neal, 1987). This places classroom teachers in a central role with regard to study skills instruction. Thus, development of the study skills of

teacher education students must become an important focus in teacher education programs (Dwyer, 1991, Wilson, 1985).

The study skills of teacher education students have been investigated in two previous studies (Jones, Slate, & Kyle, 1992; Lawler-Prince et al., 1993). Jones et al. found that secondary education major students typically performed only 60% of the academic behaviors measured by the Study Habits Inventory (SHI; Jones & Slate, 1992) appropriately. Although these students displayed many positive note-taking skills, they typically did not recopy lecture notes and did not have a system for recording new terminology. They also exhibited some positive time management techniques but tended to wait until the night before a test to study. Finally, they used some metacognitive strategies when studying but often read textbooks too passively.

Lawler-Prince et al. (1993) found that elementary education majors also performed only 60% of the behaviors on the SHI appropriately. The note-taking and time management skills of these students appeared to be similar to those exhibited by the secondary education majors in the Jones et al. (1992) study, but these elementary education majors also appeared less likely to wait until the night before an exam to study. The elementary education majors reported only a few metacognitive study techniques, and tended to have a highly passive approach to reading textbooks.

Although previous studies indicate that there may be study skills differences between elementary and secondary education

majors, no direct test of these differences was made. The present study was designed to address study habits differences in these populations by combining the data from the previous two studies for analysis. The specific research question addressed was: what differences, if any, exist in the academic skills of elementary and secondary majors?

Method

Two samples of teacher education students from previous studies were combined for analysis. One sample consistent of 146 college seniors majoring in elementary or with combined majors in elementary and special education at a university in the Mid-South (Lawler-Prince et al., 1993). The other sample consisted of 115 college seniors majoring in secondary education at the same university (Jones et al., 1992). The two samples were drawn approximately two years apart, with the secondary sample being drawn first.

Participants completed the SHI, a survey instrument that consists of 63 true-false items on which students report their typical academic behaviors. There are 30 items worded to indicate appropriate behaviors and 33 items worded to indicate inappropriate behaviors. A measure of each student's academic skills was calculated by reverse scoring items indicating inappropriate behaviors and summing his or her responses on the SHI. This procedure yields an index of study skills ranging from 0 to 63 on which high scores indicate good study skills.

Previous research on college students has indicated that the SHI has high internal consistency with a mean coefficient alpha of +.85 and a two week test-retest reliability of +.82. Validity has been established through correlations with cumulative grade point averages (average $\underline{r}$ = .39), procrastination (.46), conceptions of intelligence (.40), locus of control (.62), and dualistic thinking (.33). A coefficient alpha of +.84 was found for the present sample.

Results

The mean SHI total scores for the Elementary Education and Secondary Education samples were 37.2 ($\underline{SD}$ = 8.63) and 36.6 ($\underline{SD}$ = 8.5) respectively. These difference between means was not statistically significant, $\underline{F}(1,364) = .438$. Although there was no overall difference in study skills levels, these elementary and secondary students could have approached studying in different ways. Thus, a stepwise discriminant analysis was conducted with the individual SHI items as the discriminating variables and statistical significance at the .05 level as the inclusion criterion. The resulting function was statistically significant, $^{x}2(26) = 76.62$, $\underline{p} < .01$, and accounted for 19% of the between-groups variance (i.e., canonical correlation = .44). Following the recommendations of Tabachnick and Fidell (1983) the items with standardized discriminant function coefficients having absolute values of .3 or higher were used to interpret this function. These items are displayed in Table 1. Because the group centroids were +.77 for secondary education students and -.32 for elementary

education students, positive coefficients indicate secondary education majors reported more appropriate behavior than elementary education majors and negative coefficients indicate that elementary education majors reported more appropriate behavior than did secondary education majors.

Insert Table 1 about here

Elementary education majors report a lifestyle that is more consistent with academic work than is the lifestyle of secondary education majors. That is, elementary education majors are less likely than are secondary education majors to waste time loafing, movies, dates, and so forth, and are less likely to feel sluggish due to a lack of sleep. In addition, elementary education majors are less likely to drink beer while studying than are secondary education majors. With regard to specific study skills, elementary education majors also less likely to have difficulty discriminating between important and unimportant information than are secondary education majors.

On the other hand, secondary education majors are less likely to waste actual study time by doodling or daydreaming than are secondary education majors. Secondary education majors also demonstrate better note-taking skills, being less likely to take verbatim transcripts or to rely on tape recorders than are elementary education majors. Finally, secondary education majors are more likely to use what they are learning in school to help

them understand events outside of school than are elementary education majors.

Discussion

Our results indicate that, at least with regard to academic activities, elementary education majors tend to lead a more salubrious life style than do secondary education majors. For example, elementary education majors obtained more adequate sleep than did secondary education majors. Secondary education majors, however, make better use of study time and have better note-taking skills than do elementary education majors. Although elementary education majors have less difficulty identifying important information when studying than do secondary education majors, secondary education majors are better able to apply what they are learning to everyday life.

Though the specific reasons for our findings are unknown, one hypothesis is worthy of consideration. Secondary education students may be able to apply information better than elementary education students because the content specialty areas (i.e., math, science, english) of secondary education students are better suited to the critical application of study skills than is the more general curriculum experienced by elementary education students. That is, secondary education students are expected to be content specialists in areas such as math or science rather than generalists as is expected of elementary education students. Moreover, secondary education students may daydream less, as we found, because their curriculum is more intrinsically interesting

to them than is the curriculum for elementary education majors. Thus, the curriculum itself may contribute to students' use or non-use of appropriate academic behaviors. To ascertain the viability of this hypothesis, longitudinal research regarding students' study skills is necessary prior to enrollment in either secondary or elementary education programs and then continuing throughout the respective teacher education programs.

Readers are cautioned against overgeneralizing our results because our findings are based on a restricted sample of teacher education students from a single university in the Mid-South. Further research is needed to ascertain the generalizability of our findings.

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Table 1

Standardized Discriminant Coefficients Discriminating Elementary and Secondary Education Majors

SHI Item (Appropriate Response)	Standardized Coefficients
I try to write down everything my instructor says, as close to word-for-word as possible. (False)	+.30
I tape record lectures instead of taking notes. (False)	+.31
I spend to much time on loafing, movies, dates and so forth, that I should be spending on my coursework. (False)	-.49
I frequently do not get enough sleep and feel sluggish in class or when studying. (False)	-.30
I have a tendency to doodle or daydream when I am trying to study. (False)	+.41
I often try to make school work more enjoyable by having a beer when I study. (False)	-.32
I use the facts learned in school to help me understand events outside of school. (True)	+.32
I have trouble in picking out the important points in the material I read. (False)	-.31

Note. Group centroids are +.77 for secondary education students and -.32 for elementary education students. A positive coefficient indicates that secondary education students report more appropriate behavior; a negative coefficient indicates that elementary education students report more appropriate behavior.